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Author(s)	TAKAHASHI, Ryoichi
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Instructions for use

SOME SPECIES OF COCCIDAE FROM THE RIOUW ISLANDS — PART II.

(Homoptera)

By RYÔICHI TAKAHASHI

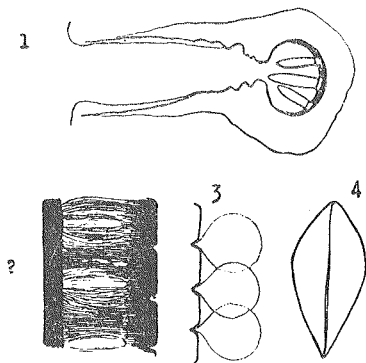
Research Institute for Natural Resources, Tokyo

(Continued from Vol. 17, p. 72.)

***Paralecanium minutum* n. sp.**

(Adult female) Strongly sclerotized, subcircular, a little asymmetrical, not indented on the margin at the clefts. Marginal zone well defined by a rather narrow sclerotized band on the venter, narrow; the band extending anteriorly for some distance along the anal cleft. Dorsum with numerous oval or elongate oval faint areolations on the submarginal area, which are much smaller than the eye and mostly more or less in lines running mesad, a blank space present at intervals of 3 or 4 lines; some minute pores sparsely scattered; no groups of pores discernible around the anal plates; many elongate irregular indistinct paler parts present on the marginal area, which are not reaching the margin. Eyes large, separated from the marginal zone. Antennae short, slender, much shorter than the distance between themselves; the segments can not be observed in the type specimen. Legs short; femora a little shorter than the tibia and tarsus together, narrowed basally; tarsi a little longer than the tibia. Stigmatic clefts small, entirely closed, within the margin, with a single (?) spine which is normal in shape, bluntly pointed and not reaching the margin. Margin with a very short, but wide tubercle between the flabellae, which is almost truncate at the apical margin; flabellae subcircular, overlapping. Anal cleft closed. Anal plates narrow, broadly rounded at the lateral angle, acute at the apex, somewhat rounded on the latero-anterior margin; the latero-posterior margin not rounded, much longer than the latero-anterior. Body 1.9 mm. long, 1.8 mm. wide.

A single specimen.

**Fig. 6.**

Paralecanium vacuun MORRISON
(Adult female)

(1) Stigmatic cleft.

Paralecanium minutum n. sp.
(Adult female)

(2) Marginal zone. (3) Flabellae.
(4) Anal plates.

Resembles *P. maritimum* GREEN, but readily separable from that species by the marginal structures.

***Platylecanium elongatum* n. sp.**

(Adult female) Pale yellowish brown. Body elongate, about 2.3 times as long as wide, asymmetrical, slightly convex dorsally, produced and bluntly pointed at one end in some specimens, without ridges. Dorsum evenly sclerotized, but not strongly, over the whole surface, without areolations, with some very small pores very sparsely scattered, and 4 small loose groups of small pores in a row latero-anterior to the anal plates on each side; the groups each with about 4-7 pores. Eyes far within the margin. Antennae rudimentary, a little longer than wide, pointed apically, not segmented, with some long setae. Legs absent (?). Stigmatic clefts closed, within the margin, very widely sclerotized along the margin, with 3 spines which are stout, gradually tapering, rounded or bluntly pointed at the tip, slightly or not curved, longer than the marginal setae, not reaching the margin, and subequal

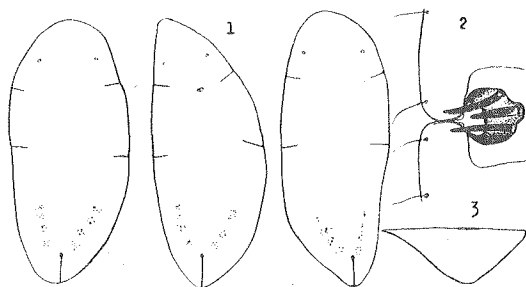


Fig. 7. *Platylecanium elongatum* n. sp.
(Adult female)

- (1) Variation in shape of body. (2) Stigmatic cleft.
(3) Anal plate.

in length, or the median one is distinctly shorter than the other 2. A prominent translucent canal running mesad from each stigmatic cleft. Spiracles slender on the stalk, moderately expanded at both ends, longer than wide. Some pores scattered between the spiracle and cleft. Margin not more sclerotized, not crenate. Marginal setae rather few, fine, simple, rather short, sparsely in a row mostly much shorter than the distances between themselves, about 14-22 in number between the stigmatic clefts on each side. Anal cleft closed, a little longer than the stigmatic canals, about thrice as long as the anal plates, not more sclerotized along the margin. Anal plates over twice as long as wide, rounded at the lateral angle, but not broadly, acute at the apex, not surrounded by a more sclerotized area; the latero-posterior margin a little longer than the latero-anterior. Anal ring in front of the plates, with setae reaching the plates. Body 4.2-4.7 mm. long.

Host plant : A wild palm, attacking the basal part of leaf.

Some specimens.

This species is characterized by the elongate body resembling *Coccus elongatus* SIGNORET in shape.

***Platylecanium riouwense* n. sp.**

(Adult female) Dark brown. Elongate, about 2.2 times as long as wide, nearly parallel

on the sides, slightly asymmetrical, rounded at both ends, not convex dorsally, strongly sclerotized. Dorsum with many faint areolations densely over the submarginal area, which are nearly as large as the central part of eye; and about 6 semitransparent paired cicatrices in a row latero-anterior to the anal plates on each side, posterior 2 of which are laterad of the plates; ridges wanting. Eyes far distant from the margin. Antennae and legs not observed in specimens. Stigmatic clefts closed, rather small, within the margin, with 3 spines which are rather slender, bluntly pointed apically, not narrowed basally, subequal in length, and far not reaching the margin. A rather short narrow canal running mesad from each stigmatic cleft. Margin simple; marginal setae short, fine, curved, much shorter than the stigmatic spines, very sparsely in a row, about 6 between the stigmatic clefts on each side. Anal cleft closed, a little longer than the stigmatic canals. Anal plates over 2.5 times as long as wide, a little rounded at the lateral angle, bluntly pointed at the apex, not narrowed on the distal part like *P. asymmetricum* MORRISON; the latero-posterior margin slightly rounded, nearly as long as the latero-anterior margin. Body 2.6 mm. long.

An incomplete specimen.

Different from *P. asymmetricum* MORRISON in the simple margin of body, the anal plates not produced at the hind end, and in other characters, and from *P. citri* TAKAHASHI in the narrower body, the stigmatic spines bluntly pointed, the structure of anal plates, etc.

Xenolecanium rotundum n. sp.

(Adult female) Shining yellowish brown, with on wax. Circular or subcircular, somewhat longer than wide, flattish, in dry specimens a little convex and roughly corrugated on the central area of dorsum, with about 8 ridges running mesad from the margin. Dorsum in the young stage with 7 sclerotized parts on the submarginal area on each side and 3 very small sclerotized parts laterad of the anal plates as shown in figure, but in the old stage sclerotized almost over the whole surface, with some small pale parts, or sclerotized except on a narrow part surrounding the central area, on the median narrow part of anterior half, and on about 4 narrow parts arising from the margin, central sclerotized plate and submarginal tubercles absent; a few short setae scattered; many rather large stout short ducts present in a pair of longitudinal clusters between the anal plates and mouth parts; many minute tubular ducts scattered over the remaining part of dorsum; these ducts each at a small oval or circular translucent part, which is apart from each other, with no rim. Antennae as long as half the distance between themselves, 7-segmented; the 2nd segment wider than long; the 3rd about 1.5 times as long as wide; the 4th twice as long as wide, or the 5th, longer than the 3rd in some specimens; the 5th longer or shorter than wide,

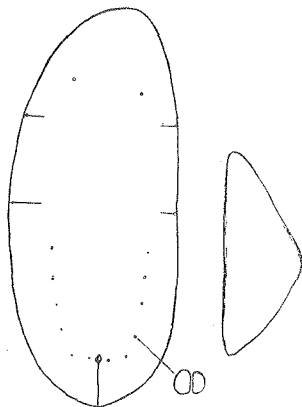


Fig. 8.

Platylecanium riouwenense n. sp.

(Adult female)

Body and anal plate.

nearly as long as the 6th; 5th and 6th with 2 long setae; the 7th as long as the 5th and 6th taken together, with some long setae. Legs short, a little shorter than the antenna; coxae wider than long; trochanters faintly defined, with a long seta; fore femora a little longer than the tibia; tibiae as wide as the 3rd antennal segment, about 1.5 times as long

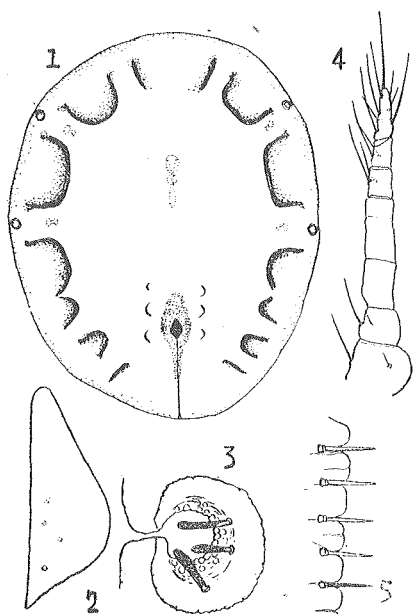


Fig. 9. *Xenolecanium rotundum* n. sp.
(Adult female)

- (1) Body (young stage). (2) Anal plate.
(3) Stigmatic cleft. (4) Antenna.
(5) Margin.

as wide and somewhat shorter than the tarsus in the fore legs, but much shorter than the tarsus in the hind pair; tarsal digitules very long, distinctly capitate; claws with 2 stout capitate digitules. Stigmatic clefts large, closed, within the margin, very widely sclerotized along the margin, with many pores and 3 spines; the spines subequal in length, somewhat narrowed towards the base, rounded apically, slightly curved, as long as, or a little longer than the marginal setae, not reaching the margin. Spiacles rather short at the stalk, more expanded at the apex than at the base, much nearer to the cleft than to the median line of body; some usual small pores present in a wide fold between the spiracle and cleft. Margin crenate; short furrows running mesad from between the crenations; marginal setae spine-like, slender, pointed, numerous, arranged in a row, a little crowded at the hind end, equal in length, arising from within the margin, usually longer than the distances between themselves; a crenation present between the setae. Anal cleft closed, about thrice as long as the anal plates. Anal plates over twice as

long as wide, rounded at the lateral angle, bluntly pointed apically, with 4 setae on the distal half; the latero-posterior margin much shorter than the latero-anterior; a wide sclerotized area surrounding the plates, a little extending anteriorly, and posteriorly along the anal cleft, but not reaching the hind end. Anal ring below the plates, with about 10 setae much shorter than the plates. Venter with no segments; a few minute tubular ducts scattered; many transverse rows of minute spinules and some rather long setae on the median area; some short setae scattered on the submarginal area; 2 pairs of long setae in front of the genital area, of which the posterior pair is longer, no clusters of pores on the genital area. Body about 2.6–2.9 mm. long.

Many specimens; common, protected by ants.

Differs from other species of the genus in the developed antennae and legs, the dorsum lacking large pores with a prominent rim and a

central sclerotized plate, but with peculiar sclerotized parts, and in the spine-like marginal setae.

Ctenochiton carinatus n. sp.

(Adult female) Dark brown, blackish on the dorsal ridges and margin, not shining, without wax. Broadly oval, somewhat narrower anteriorly, slightly protruding and pointed at the front end in some specimens, symmetrical, not convex dorsally, but with a narrow median ridge arising from the front end and reaching above the mouth parts, and a pair of longer curved ridges as shown in figure. Dorsum sclerotized, more so narrowly along the margin and anal cleft, densely with many large areolations over the whole surface, which are oval or subcircular, mostly apart from each other, and with a broad rim; the rim not distinct in some old females; numerous minute circular pores densely over the surface except on the ridges in the young stage; about 25 submarginal tubercles on each side, which are mostly in an irregular row. Antennae long, a little longer than the distance between themselves, 8-segmented; the 2nd segment 2.5—3 times as long as wide, about 1.5 times as long as the 1st; the 4th and 5th subequal in length, slightly shorter than the 3rd, over twice as long as wide, about 1.5 times as long as the 6th; the 5th with 2 long setae; the 6th and 7th equal in length, about 1.5 times or twice as long as wide, each with a long seta; the 8th nearly as long as the 5th, with some long setae and a very long apical one. Legs long; hind legs somewhat longer than the antenna; trochanters defined; coxae longer than wide; femora nearly as long as the tibia; tibiae as long as the tarsus in the posterior 2 pairs; tarsi as wide as the 4th antennal segment with 2 very long capitate setae; ungual digitules stout, capitate. Stigmatic clefts wanting, but represented by a spine that is longer than other marginal spines. Margin not crenate; marginal setae spine-like, rather slender, pointed variable in length, numerous, mostly in a row, a little crowded at the hind end and near the stigmatic spines, arising from much within the margin, much longer than the distances between themselves. Spiracles normal in shape, longer than wide. Rostral loop very long, reaching the anal plates. Anal cleft closed, a little shorter than the anterior median ridge, over thrice as long as the anal plates. Anal plates over twice as long as wide, much rounded at the lateral angle, pointed apically, surrounded by a narrow sclerotized band, with a few setae near the apex, the latero-posterior margin a little longer than the latero-anterior. Anal ring below the plates, with the setae not reaching the apices of plates. Venter with some body segments discernible; a few

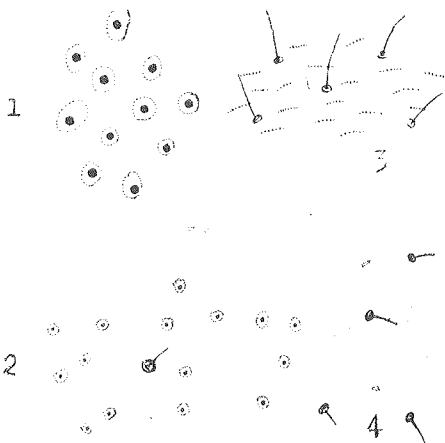


Fig. 10. *Xenolecanium rotundum* n. sp.
(Adult female)

- (1) Large ducts on dorsum. (2) Small ducts on dorsum. (3) Median area of venter. (4) Submarginal area of venter.

small setae in rows on the median area; many short simple setae in a row on the submarginal area, which are much fewer than the marginal setae; 3 pairs of very long fine setae in front of the anal plates; a pair of similar setae near the hind end; many small pores around the anal plates; some in front of them; some minute ducts scattered. Eody 2.9—3.8 mm. long.

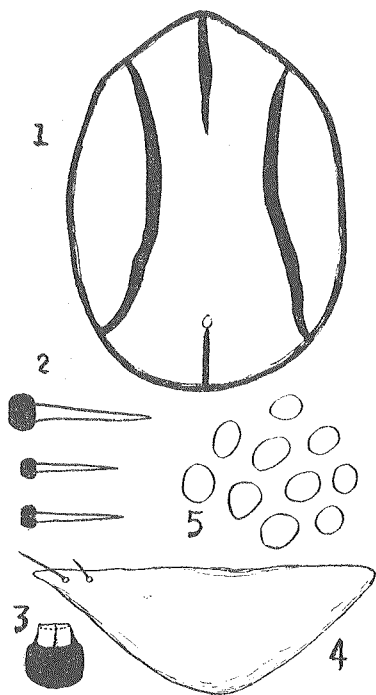


Fig. 11. *Ctenochiton carinatus* n. sp.
(Adult female)

- (1) Body showing dorsal ridges.
(2) Marginal spines. (3) Submarginal tubercle. (4) Anal plate. (5) Dorsal areolations.

not well defined, with a seta; femora longer than the tibia; tibiae distinctly shorter than the tarsus, narrowed basally; tarsi not well separated from the tibia, long, narrowed on the distal half, nearly as long as the femur; tarsal digitules long, distinctly knobbed; claws short, with digitules distinctly knobbed. Stigmatic clefts widely open, shallow, not sclerotized, with a spine which is slender, much shorter than the marginal setae, not broadened towards the base, reaching the margin, and wanting in most specimens. Margin thin, with many very long simple setae in a row, which are fine, a little curved and usually longer than the distances between themselves. Spiracles much expanded at the apex, less so at the base, rather narrow at the stalk, nearly as long as the diameter at the apex; some quinduelocular pores arranged almost in a row between the spiracle and cleft; many similar pores scattered at the cleft; numerous tracheae arising from each spiracle. Anal cleft open, short. Anal plates elongate, broadly rounded on the lateral margin, blunt at the apex, encircling the anal ring and protruding into the anal cleft, with about 7 setae; the base much shorter than the lat-

Many specimens; common, always protected by *Crematogaster*. Near *C. crematogastris* TAKAH., but characterized by the prominent ridges on the dorsum.

Inglisia speciosa n. sp.

(Adult female) Body brownish, with a very high vertical median plate of wax, which is thin, brittle, transparent and beautiful. Oval, slightly convex dorsally, not sclerotized without tubercles and ridges; body segments wanting. Dorsum with many small subcircular areolations except on the median area; cribriform plates absent. Antennae much shorter than the space between themselves, a little shorter than the fore leg, 6-segmented; the 2nd segment a little wider than long, with a seta; the 3rd twice as long as the 2nd, as long as the 4th and 5th together, about twice as long as wide, with a seta near the apex; the 4th and 5th equal in length, longer than wide, with a seta; the 6th slightly shorter than the 3rd, much shorter than the tarsus, with some long setae. Legs short; coxae longer than wide in some specimens; trochanters

eral margin. Venter with a pair of long setae and a few short ones in front of the genital opening; a pair of longitudinal groups of multilocular pores at the posterior part, each group with about 24–30 pores; some long slender tubular ducts very sparsely scattered on the marginal area. Body 3.5–4.5 mm. long, 2.9 mm. wide, anal cleft 0.6 mm. long.

8 specimens; sometimes protected with shelters by *Crematogaster*.

This species is characterized by the long fine marginal setae and by the absence of dorsal tubercles and ridges. Much differs from *I. chelonoides* GREEN in the characters of marginal setae and stigmatic spine.

Parlatoria flava n. sp.

(Adult female) Scale elongate, oval or narrow, yellow, about 1.6 mm. long. Body nearly subcircular, broadest at the basal part of abdomen, without lateral spine. Antennae with a long seta. Anterior spiracles with a parastigmatic pore, posterior spiracles without pores. Thoracic segments each with 2 duct tubercles on each side, which are not sclerotized; meso- and metathorax slightly convex laterally; metathorax with 2 small macroducts on each side. Basal abdominal segment

slightly convex laterally, with 2 small macroducts, and 2 plates near the hind end on each side, and a submarginal cicatrix which is not distinct in some specimens; the 2nd abdominal segment with 3 macroducts and 6 plates on each side; the 3rd with a macroduct and 3 similar ones in a row on the submarginal area; the plates widened basally, truncate at the apex, not or scarcely fimbriated. Pygidium broadly rounded at the hind end. Anal opening small, posterior to the center. Circumgenital pores in 4 groups, 6 or 7 in the anterior group, 5 in the posterior. Median lobes longer than wide, parallel, widely apart, rounded apically, notched on each side; the 2nd lobes similar to, but smaller than, the median lobes; the 3rd smaller than the 2nd; the 4th replaced by a plate which is nearly as long as, or a little longer than wide, not widened basally, slightly fimbriated at the distal margin smaller than the neighbouring plates, shorter than the 3rd lobes, and without paraphyses; distance between the median lobes equal to that between the median and 2nd. Fimbriated plates 2 between the median lobes, and also between the median and 2nd; 3 between the 2nd and 3rd, of which the posterior one is narrowed towards the base and the other 2 are narrower than the 3rd lobes; 3 wide plates between the 3rd and 4th lobes, of which the middle one is larger, and wider than the median lobes; about 8 plates anterior to the 4th lobe, which are usually with a slender process at the apex and some of which are narrowed basally. Paraphyses developed at the bases of posterior 3 pairs of lobes, much extending forward. A median marginal macroduct and about 9 marginal ones on each side, the anterior marginal ones smaller; submarginal macroducts not numerous, distributed as shown in figure,

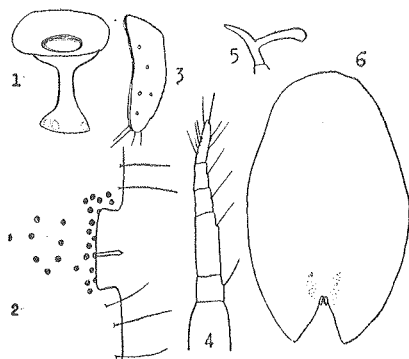


Fig. 12. *Inglisia speciosa* n. sp.

(Adult female)

(1) Spiracle. (2) Stigmatic cleft. (3) Anal plate. (4) Antenna. (5) Abnormal stigmatic spine. (6) Body.

smaller than the marginal ones; 2 pairs of submarginal ones present in front of the 2nd and 3rd lobes; about 8 very small slender dorsal ducts in a cluster laterad of the groups of circumgenital pores, about 9 similar ducts in a cluster near the base of pygidium on each side. Body about 0.38 mm. long.

A few specimens.

Related to *P. mytilaspiiformis* GREEN, but differs from that species in the scale not so elongate, the 2nd and 3rd lobes smaller than the median, the 4th replaced by plates, the basal abdominal segment with much fewer macroducts, the distribution of submarginal ducts on the pygidium, and in other characters. Different from *P. crotonis* DOUGL. in the more elongate

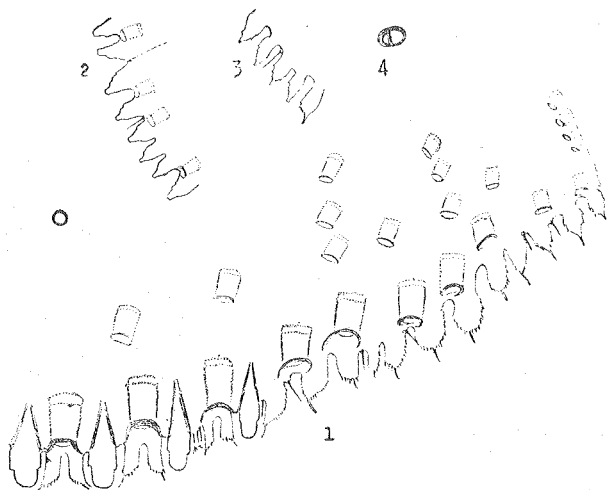


Fig- 13. *Parlatoria flava* n. sp.
(Adult female)

- (1) Posterior marginal area of pygidium. (2) Margins of 1st and 2nd abdominal segments. (3) Plates on 3rd abdominal segment. (4) Cicatrix on basal part of abdomen.

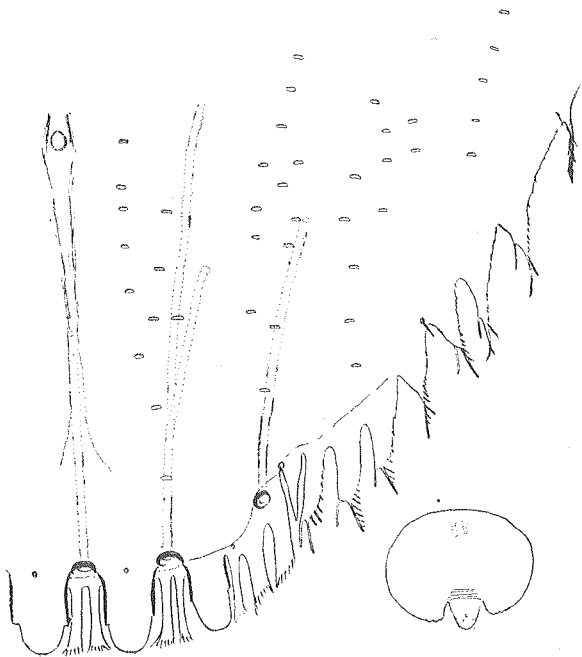
scale, the absence of a lateral spine on the prosoma, the distribution of ducts on the pygidium, etc., and from *P. pittospori* MASK. in the narrower scale, the paraphyses more developed, the narrower lobes, and in other structures.

***Aspidiotus destructor* SIGNT.**

A few specimens; very scarce.

***Hemiberlesia mckenziei* n. sp.**

(Adult female) Scale circular, pale yellowish brown on the secretion, dark reddish brown on the exuviae. Prosoma large, strongly sclerotized, with no spine on the margin, wanting fenestrations, with about 10 small semitransparent parts in a cluster on the dorsum in front of the mouth parts, which are irregular in shape. Prosomatic lobes large, reaching to or beyond the midlength of pygidium, broadly rounded apically, lacking ducts, with a few marginal setae. Abdominal segments not convex laterally. Pygidium tapering, with paraphyses weakly developed. Anal opening not large, a little posterior to the center. Perivulvar pores in 4 groups, each with 3 or 4 pores; paravulvar folds a little sclerotized; prevulvar scleroses narrow, a little sclerotized; apophyses absent; a few microducts present on the lateral part. Median lobes longer than wide, parallel, rounded apically, notched on either side; the 2nd lobes slightly diverging, as long as, but narrower than, the median, scarcely notched on the mesal side; the 3rd spine-like, conical, pointed, a little sunken, nearly as long as the 2nd, but shorter than the adjacent plates, not reaching a line drawn across the bases of the 2nd lobes; the 4th entirely wanting. Fimbriated plates 2 between the median lobes and also between the median and 2nd; 3 between the 2nd and 3rd, of which the lateral 2 are wider, and as wide as the bases of the 3rd lobes; 9 plates anterior to the 3rd lobe, of which the middle 4 are much widened basally, with a long slender fimbriated apical process, the posterior 3 are with 2 apical processes, and the anterior 2 are thin. A median and 2 pairs of lateral marginal macroducts present; dorsal ducts in 3 longitudinal groups and in a row on each side, about 12 in each group and 5 in the lateral row, equal in size, slender, not reaching the base of pygidium. Body about 1.2–1.25 mm. wide.

**Fig. 14.** *Hemiberlesia mckenziei* n. sp.

(Adult female)

Pygidium and body.

A few specimens.

This species much resembles *Aonidiella*, but differs from that genus

in the absence of paraphyses between the lobes and in the conical 3rd lobes, and is characterized by the developed prosomatic lobes and by the 3rd lobes being conical and much sunken.

Named after Dr. H. L. MCKENZIE who has much contributed to the study of this genus.